

# Factoring

① Look for a GCF & pull one out if there is one.

EX:  $5x + 25$   
 $5(x + 5)$

2 terms

- Is it Subtraction?

- Are both terms Perfect Squares?

Difference of Squares

EX:  $x^2 - 36$

$(x + 6)(x - 6)$

EX:  $x^4 - 81$  [Double dos]

$(x^2 + 9)(x^2 - 9)$

$(x^2 + 9)(x + 3)(x - 3)$

3 terms

\* Play X-Game

\*  $a = 1$

- Write your factors

EX:  $x^2 + 10x + 24$

\*  $a > 1$

- Slip & Divide or Grouping

EX:  $3x^2 + 8x + 4$

$(x + \frac{2}{3})(3x + 2)$

$(x + 2)(3x + 2)$

4 terms

## Grouping

- group 1st 2 terms
- group last 2 terms
- take out the GCF of each group.

EX:  $(x^3 - 2x^2) - 5(x + 10)$

$x^2(x - 2) - 5(x + 2)$

$(x - 2)(x^2 - 5)$